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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/047,032

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Andreas Johannes Gerrits

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

WOZNIAK, JAMES S

ART UNIT

PAPER NUMBER

2626

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DELIVERY MODE

10/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/047,032	Applicant(s) GERRITS, ANDREAS JOHANNES	
	Examiner JAMES S. WOZNAK	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the office action from 4/15/2008, the applicant has submitted an amendment, filed 7/15/2008, amending independent claims 1, 5, 9, 13, and 17, while arguing to traverse the art rejection based on the limitation regarding a delaying element used for delaying in a decoding process (*Amendment, Page 10*). The applicant's arguments have been fully considered but are moot with respect to the new grounds of rejection, necessitated by the amended claims and further in view of Liljeryd et al (*WO 00/45378*).

2. In response to the amendment to Fig. 1, the examiner has withdrawn the previous drawing objection.

3. In response to the applicant's comments directed to the lack of specification headings (*Amendment, Page 9*), the examiner notes that the previous specification objection has been withdrawn, but still recommends the inclusion of such headings to further the intelligibility and clarity of the specification. In this case, page 1, lines 1- 19 is considered to be the field of invention (*the field of the invention is discussed*), page 1, line 22- page 3, line 21 will be considered to the background of the invention (*only the prior art is described*), page 3, line 24- page 5, line 11 is the summary of the invention, page 5, lines 14-19 is the brief description of the drawings, and page 5, line 22- page 9, line 26 is the detailed description of the invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-2, 4-6, 8-10, 12-14, 16-18, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chai (*U.S. Patent: 6,137,915*) in view of the Applicant's admitted prior art (*hereinafter, "AAPA"*) and further in view of Liljeryd et al (*WO 00/45378*).

Regarding **claims 1, 5, 9, 13, and 17**, Chai discloses an apparatus and method for error concealment for hierarchical subband coding and decoding. Chai's system includes the following:

a transmitter for transmitting an input signal to a receiver via a transmission channel (Fig. 2, item 250; col. 4, lines 14-22),

the transmitter comprising a means for decomposing an input signal into frequency band signals (Fig. 2, items 222 (1-n) , 220 (1-n); col. 3, lines 28-35, lines 53-64),

the transmitter further comprising a first encoder for encoding the first frequency band signal into a first encoded frequency band signal and a second encoder for encoding the second frequency band signal into a second encoded frequency band signal (Fig. 2, abstract, subband coding; col. 3, lines 28-33, lines 53-64),

the transmitter being arranged for transmitting the first and second encoded frequency band signals via the transmission channel to the receiver (Fig. 2, items 240 and 245),

the receiver comprising a first decoder for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder for decoding the second encoded frequency band signal into a second decoded frequency band signal (Fig. 2, items 260, 270, and 290; col. 4, lines 14-21, elementary streams),

the receiver further comprising a means for providing a single output signal from decoded subband signals into an output signal (Fig. 2, items 270, 275, 290, 295; col. 4, lines 14-22),

the receiver further comprising reconstruction means for reconstructing the second decoded frequency band signal when the second decoded frequency band signal is not available, characterized in that the reconstruction means are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal (Fig. 5, col. 4, lines 30-42; col. 5, lines 9-27; corrupted subband HH2 can be concealed by using uncorrupted coefficients ... from other subbands LH2 and HL2).

Although Chai teaches the concept of error recovery using other frequency band signals and teaches the concept of subband coding/decoding, Chai does not explicitly teach the use of a splitter for splitting the input signal into bands and a combiner for merging the bands to produce a single output. Such coding pre/post processing means are well-known in the coding art as is evidenced by the AAPA. In the AAPA, it is stated that the structure of Fig. 1 is "known" and "prior art" (*Specification, Pages 2 and 5*). Fig. 1 shows that a splitter is used to divide an input signal into frequency bands that are provided to multiple encoders at a transmitter (items 20, 22, and 24). Fig. 1 also shows that a combiner is used to combine frequency bands from first and second decoders to provide a single output at a receiver (items 26, 28, and 30). The descriptions

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associated with Fig. 1 further describe this well-known processing (Page 5, Line 22- Page 6, Line 14).

Chai and the AAPA are analogous art because they are from a similar field of endeavor in multi-band coding systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Chai with the well-known splitter/combiner structures taught by the AAPA in order to provide a well-known and readily available means for splitting a signal into bands and combining those bands to produce an output signal, wherein, advantageously, only a low band signal is necessary for proper decoding (*Page 2, Lines 31-34; and Page 5, Line 22- Page 16, Line 14*).

Although Chai in view of the APAA teaches a concept of error recovery using other frequency band signal and the concept of subband coding/decoding enabled via a band splitter, Chai in view of the APAA do not explicitly recite a delay element that delays either the first or second frequency band signal during decoding. Liljeryd, however, recites such a delay unit for use in a decoder that delays one of the frequency bands during a decoding process (*Page 8, Line 35- Page 9, Line 10; and Fig. 6, Element 605*).

Chai, the AAPA, and Liljeryd are analogous art because they are from a similar field of endeavor in multi-band coding systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Chai in view of the APAA with the delay unit taught by Liljeryd in order to compensate for the processing time of decoding a high band signal so that a proper wideband audio output can be obtained (*Liljeryd, Page 9, Lines 8-10*).

Regarding **claims 2, 6, 10, 14, and 18** Chai teaches everything claimed, as applied above (see claim 1). In addition, Chai teaches "that the reconstruction means are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal by extending a bandwidth of the first decoded frequency band signal" (col. 5, lines 20-25; corrupted HH2 can be concealed by using uncorrupted coefficients ... from subbands LH2 and HL2 [extending the bandwidth]).

Regarding **claims 4, 8, 12, 16, and 20**, Chai teaches everything claimed, as applied above (see claim 1). In addition, Chai teaches "the first frequency band signal and the first encoded frequency band signal and the first decoded frequency band signal are signals having a low frequency band and in that the second frequency band signal and the second encoded frequency band signal and the second decoded frequency band signal are signals having a high frequency band" (Fig. 2, col. 3, lines 28-35; col. 4, lines 14-23, lines 31-42; e.g., LL is a low frequency band, HH is a high frequency band, etc).

6. **Claims 3, 7, 11, 15, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chai (*U.S. Patent: 6,137,915*) in view of the Applicant's admitted prior art (*hereinafter*, "*AAPA*") in view of Liljeryd et al and further in view of Zinser (*U.S. Patent: 5,384,793*).

Regarding **claims 3, 7, 11, 15, and 19**, Chai in view of the AAPA and further in view of Liljeryd teaches everything claimed, as applied above (see claim 1). As stated in the rejection of claim 1, Chai teaches that an adjacent subband can be used to repair a corrupted subband (col. 2, lines 9-27), but Chai does not specifically teach "that the reconstruction means are arranged for

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reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal." However, the examiner contends that this concept was well known in the art, as taught by Zinser.

In the same field of endeavor, Zinser discloses an error protection method for dynamic bit allocation sub-band coding. Zinser teaches that energies from the previous frame can be combined with energies from the adjacent energies in the current frame for synthetic regeneration (col. 3, lines 8-16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chai in view of the AAPA and further in view of Liljeryd by specifically providing features, as taught by Zinser, because it is well known in the art at the time of invention for the purpose of obtaining a better estimate by interpolating with information time [previous] as well as frequency [adjacent subband].

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See PTO-892.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/James S. Wozniak/
Patent Examiner, Art Unit 2626